BATENCHUK, Ye.N., inzh.

Electric power, steam, and air consumed in constructing the Irkutsk Hydroelectric Power Station. Energ. stroi. no.2:58-60 '59
(MIRA 13:3)

1. Angaragesstroy.
(Irkutsk Hydroelectric Power Station)

BATENCHUK, Ye.N., inzh.

New requirements for the mechanization of the construction industry in northern Russia. Energ. stroi. no.31:63-70 '62. (MIRA 16:7)

1. Stroitel'stvo Vilyuyskoy gidroelektrostantsii.
(Russia, Northern—Earthmoving machinery)

BATENEV, I.M.

KRASOTKIN, S.G., inzhener; SEGERKRANTS, I.V., inzhener; BATENEV, I.M., arkhitektor.

Standard dosing for a sintering plant. Stroi.prom. no.8:21-28 Ag '57. (MIRA 10:10)

1. Institut mekhanicheskoy obrabotki poleznykh iskopayemykh, Leningrad. (Metallurgical plants--Design and construction)

18.7100, 18.2000

75973
SOV/133-59-10-34/39

AUTHORS: Koroleva, V. A., Mel'nikov, A. I., Bateneva, M. K., Serebrenikov, A. V., Konovalova, T. S.

TITLE: Effect of the Initial Structure of Transformer Steel on Its Magnetic Properties

PERIODICAL: Stal', 1959, Nr 10, pp 947-948 (USSR)

ABSTRACT: The authors attempted to determine (1) the influence of the initial structure of transformer steel on its electric and magnetic properties, and (2) optimal annealing temperatures in tunnel-type furnaces for steel with different initial structure. The authors found that the finishing temperature (850 C instead of 650 C by reducing the number of passes to 2 instead of 5) for 0.4 mm thick sheets decisively influences the initial and the final structure and, consequently, magnetic properties. The fuller the recrystallization and the larger the grain size before annealing, the larger it is after low-temperature annealing and, consequently, the lesser the specific loss. Optimal annealing temperatures were determined for steels produced

Card 1/3

in both, open-hearth and electric furnaces. Optimal annealing temperatures: 880 C for electric steel (metal temperature 860 to 870 C), 920 C for open-hearth steel. Table 1 shows annealing temperature rates tested and the resulting magnetic properties of steel served to select optimal annealing temperatures:

TABLE 1

	Rates			
	I	II	III	IV
Temperatures in furnace zones, °C				
first.....	940	960	970	980
second.....	980	970	980	990
third.....	930	920	930	940
Mean specific loss P_{10}, w/kg				
electric steel.....	1.35	1.37	-	-
open-hearth steel.....	1.51	1.49	1.45	1.44

Effect of the Initial Structure of
Transformer Steel on Its Magnetic Properties

75973
SOV/133-59-10-34/39

Elevated annealing temperatures for electric steel (II) increased specific losses while the same conditions (II, III, IV) for open-hearth steel decreased them. Rate III is preferable for open-hearth steel since at higher temperatures (IV) embrittlement was observed. As a result of the above tests, the plant introduced separate annealing for open-hearth and for electric steel reducing spoilage.

ASSOCIATION: Upper Iset' Metallurgical Plant (Verkh-Isetskiy metallurgicheskiy zavod)

Card 3/3

CHIZHOV, D.G.; KOGTEV, G.I.; LAVRENENKO, K.D.; SPIRIN, S.A.; NEKRASOV, A.M.; IVANOV, M.I.; UFAYEV, M.Ya.; GRISHIN, I.K.; KOSTIN, M.F.; POPOV, V.A.; ZAGORODNIKOV, P.I.; FEDOTOV, P.N.; KAZ'MIN, A.V.; FOMICHEV, G.I.; YERSHOV, P.I.; MESHCHERYAKOV, V.I.; YEFREMOV, S.G.; LEVIN, I.S.; LETUCHEV, L.I.; BELKIN, M.N.; OBOLONKOV, M.I.; BATENIN, B.A.; BUR'YANOV, B.P.; KAMATOV, P.I.; KOKOREV, S.V.

Nikolai Alekseevich Andreev. Elek. sta. 27 no.10:62 O '56.
(Andreev, Nikolai Alekseevich, 1897-1956) (MLRA 9:12)

TULIN, S.N., inzh.; LOKSHIN, V.A., kand. tekhn. nauk; BATENIN, B.A., inzh.; DANILOV, I.A., inzh.

Industrial tests of a cooling unit with aluminum tube designed by the All-Union Scientific Research Institute for Metallurgical Machines. Elek. sta. 36 no.9:8-12 S '65. (MIRA 18:9)

BATENIN, I.V.; SHAROV, B.V.

X-ray apparatus for the structural analysis of radioactive materials. Prib.i tekh.eksp.no.3:59-65 M-D '56. (MLRA 10:2)
(X-ray spectroscopy) (Radioactive substances)

AUTHOR: BATENIN, I.V., SHAROV, B.V. 89-9-16/32

TITLE: X-Ray Examination of Irradiated Uranium when Studying its Growth under Irradiation. (Rentgenograficheskoye izucheniye urana v svyazi s yavleniyem rosta pri obluchenii)

PERIODICAL: Atomnaya Energiya, 1957, Vol 3, Nr 9, pp 261-262 (U.S.S.R.)

ABSTRACT: A larger number of samples of natural uranium and of 2% enriched U^{235}, which had been irradiated in the reactor for a longer period at the same temperature, are subjected to an X-ray examination. It was shown that the samples investigated were not homogeneous as a result of the fluctuations occurring in the course of the process of their production. Only the different degree of texture in the casting, even at different points of one and the same casting, can serve as a measure for the different growth values during irradiation. (With 2 Tables, 2 Illustrations, and 3 Slavic References).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 23.4.1957
AVAILABLE: Library of Congress

Card 1/1

21(1), 18(7) SOV/89-6-5-11/33

AUTHORS: Batenin, I. V., Rudenko, A. N., Sharov, B. V.

TITLE: Dilatometric Investigation of Rolled Uranium Rods (Dilatometricheskiye issledovaniya prokatannykh sterzhney urana)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 5, pp 565-567 (USSR)

ABSTRACT: Technically pure uranium which was rolled into rods of 4 mm diameter at ~300°C and at high pressure, was investigated in a vacuum dilatometer, and the course of the dilatometric curves for the first thermal cycle was found to be anomalous. After heating up to 525°C and subsequent cooling the dilatometric curves correspond to the known curves for rods with saturated axial structure [010]. An anomalous course of the curves is found in the case of cooling down also if heating during the first cycle ranged between 200 and 500°C. If the uranium is heated up to ~180°C, the curve for cooling coincides with that for heating, whereas in the case of heating up to more than 180°C the curves do not coincide. Heating up to temperatures of from 250° to 520°C shortens the rods. The rods shortened by the first thermal cycle are characterized by a noticeable shift of the inversion point (up to ~400°C). In the case of cooling down to ~600°C the inversion point is again shifted down to a temperature of ~ 200°C. If, during

Card 1/2

the second thermal cycle, the temperatures which correspond to inversion point are not exceeded, the curve for cooling practically coincides with that for heating. The results obtained by measurements are shown by diagrams; the measuring methods employed are not dealt with in detail. The anomalous course taken by the dilatometric curves during the first heating of an uranium rod may possibly be connected with the diffusion of the impurities still existing in the technically pure uranium. It is possible that the said anomaly does not occur in the case of uranium of an especially high degree of purity. There are 3 figures and 2 references, 1 of which is Soviet.

SUBMITTED: November 25, 1958

24(2), 21(7) SOV/126-7-2-12/39

AUTHORS: Batenin, I. V., Il'ina, V.A., Kritskaya, V.K. and Sharov, B.V.

TITLE: On the Effect of Neutron Irradiation on the Fine Crystalline Structure of Metals and Alloys (K voprosu o vliyanii neytronnogo oblucheniya na tonkuyu kristallicheskuyu strukturu metallov i splavov)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 7, Nr 2, pp 243-246 (USSR)

ABSTRACT: The metals investigated were Fe, Cr, Ni and Cu and the solid solutions were Fe-Ni, Fe-Cr, Fe-Mn, and Fe-W. Specimens were made up of each of these materials, their size being 20 x 10 x 2 mm. As a preliminary step before the irradiation all the specimens were annealed at the following temperatures: Ni and Cu at 400°C (30 minutes), Fe and the alloys Fe-Ni and Fe-Mn at 600°C (2 hours), Fe-Cr and Fe-W at 650°C (2 hours) and Cr at 900°C (2 hours). The specimens thus treated were placed in hermetically sealed aluminium containers and were then irradiated by neutrons. The temperature of the specimens during irradiation did not exceed 80°C. The neutron flux was 10^{20} neutrons/cm^2. The structure of the irradiated

Card 1/2

On the Effect of Neutron Irradiation on the Fine Crystalline Structure of Metals and Alloys

metals and alloys was studied by X-ray analysis. It was found that in the majority of specimens the interference lines become broadened after neutron irradiation. Table 2 gives the line widths of the interference lines before and after irradiation. Figs 1 and 2 show the corresponding lines before and after irradiation. These figures refer to copper (Figs 1 and 2) and Fe-Ni respectively. There are 2 tables, 3 figures and 19 references, 5 of which are Soviet, 14 English.

ASSOCIATIONS: ITEF AN SSSR and Institut metallovedeniya i fiziki metallov TsNIIChM (Institute of Metallography and the Physics of Metals TsNIIChM)

SUBMITTED: September 6, 1957

BATENIN, I.V.; IL'INA, V.A.; KRITSKAYA, V.K.; SHAROV, B.V.

Effect of neutron irradiation on the fine crystal structure of metals and alloys. Fiz.met. i metalloved. 7 no.2:243-246 F '59. (MIRA 12:6)

1. ITEF AN SSSR i Institut metallovedeniya i fiziki metallov TSentral'nogo nauchno-issledvatel'skogo instituta Chernoy metallurgii.
(Neutrons) (Metallography)

21 (9)

AUTHORS: Batenin, I. [illegible]enko, A. N., Sharov, B. V. SOV/89-7-4-3/28

TITLE: The Growth of Uranium Rods in an Aggressive Gaseous Medium

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 329-332 (USSR)

ABSTRACT: The authors investigate rods made from technically pure uranium (diameter 2 to 4 mm, length up to 100 mm), the deformation texture of which had been removed by quenching. The extension of the rods was determined from the variation of the distances between the front surfaces of these rods, which had previously been polished until metallic luster was attained, or also from the variation of the distance between the marks previously made on the cylindrical surface. In some cases the extension was measured directly from the duration of the experiment by means of an indicator system. The gas pressure in the measuring apparatus could be varied between 10^{-2} mm and atmospheric pressure. The temperature of the samples was controlled by means of a thermocouple. Heating of the samples with 4 mm diameter at atmospheric pressure led to a change of length. The first 3 diagrams illustrate the dependence of the growth of the rods on pressure at the temperatures of the

Card 1/4

α-, β-, and γ-phase. The fourth diagram gives data concerning the dependence of the rate of increase of the rods on their diameter. Conditions otherwise remaining the same, samples, which have a thin oxide film on their surface, increase in length more rapidly than such as have a pure surface. The rate of increase at 500° C somewhat exceeds the rate of increase of the quenched rods. At normal pressure and at temperatures corresponding to the β- and γ-phase, the samples extend when heated in nitrogen. Experiments carried out at atmospheric pressure in carbon monoxide gas prove the increase of the size of the rods at temperatures corresponding to the γ-, β-, and α-phase. The density of the metal after the increase of volume is practically the same as the initial density. The increase in rod volume at the temperatures of the β- and α-phase does not change the density of the sample. The surface of a uranium rod which has grown in volume when heated in air has a cubic face-centered lattice with the parameter 5.31 Å. This lattice corresponds to the structure of UO_2. In conclusion,

 the volume increase of copper wires is dealt with. A copper

wire having a diameter of from 0.5 to 1 mm increases in volume by several per cent when heated up to 900° in air within 30 minutes. With conditions otherwise being equal, the rate at which these wires increase in volume is inversely proportional to their diameter. Also the state of the wire surface exerts an influence on the increase in its volume. Finally, a possible mechanism for the volume increase of uranium rods is dealt with: Oxygen diffuses into the heated uranium rod, so that a film of the lowest oxides ($UO + UO_2$) is formed. Oxidation is irregular and independent of crystallographical directions. Thus, it is possible to observe a colored mosaic on the electropolished uranium surface. The planes (020) have the highest degree of oxidizability, and the planes (002) the lowest. In the course of time also the lowest oxides oxidize with progressing oxidation processes. The increase in the rod volume is caused by oxygen which diffuses into the layer and oxidizes the lowest oxide. The oxygen exercises its most intensive effect with respect to the volume increase of uranium rods if the conditions corresponding to the production of the lowest oxides exist. There are 5 figures, 2 tables, and 1 Soviet

The Growth of Uranium Rods in an Aggressive Gaseous Medium SOV/89-7-4-3/28

reference.

SUBMITTED: February 13, 1959

Card 4/4

84684

21.6200 1138, 1403, 2308 only

S/020/60/134/004/008/023
B019/B067

AUTHORS: Batenin, I. V., Il'ina, V. A., Kritskaya, V. K., Kurdyumov, G. V., Academician, and Sharov, B. V.

TITLE: Effect of Neutron Irradiation on the Crystalline Fine Structure and the Properties of Metals and Alloys

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4, pp. 802 - 805

X

TEXT: The authors studied the broadening of X-ray interference lines of iron, iron alloys, and copper by neutron irradiation (10^{20} - 10^{21} n/cm^2). Prior to the experiments the samples were annealed at 600 - 650°C. Fig. 1 shows the changes of the (220)- and (400) interference lines of iron and copper due to neutron irradiation, Fig. 2 shows two X-ray photographs of copper (before and after irradiation). In Table 1 the changes in the widths of the interference lines are summarized:

Card 1/3

Effect of Neutron Irradiation on the Crystalline Fine Structure and the Properties of Metals and Alloys

S/020/60/134/004/008/023
B019/B067

Table 1

Material	Indices of the reflecting surfaces	Line widths before irrad.	Line widths after irrad.	Distortions of II kind $\Delta a/a \cdot 10^3$	Block dimensions $D \cdot 10^6$ cm
Fe	(110)	5.0	5.6	0.65	8
	(220)	7.3	9.4		
Cu	(200)	5.9	7.0		
	(400)	11.0	15.6	1	5

In Table 2 the changes in microhardness are given. The values are between 26 and 66%, according to material and irradiation intensity. Since the changes in the interference lines are the same as in cold-forming, the authors conclude that neutron irradiation leads to a reduction of the regions of coherent scattering and to microtensions, as is the case in cold-forming. The solidification of the material is connected with the change in the crystal properties in the microregions. Here, the resistance to dislocations in the lattice is increased. The authors conclude there-

Card 2/3

Effect of Neutron Irradiation on the Crystalline Fine Structure and the Properties of Metals and Alloys

S/020/60/134/004/008/023
B019/B067

from that the increase in microhardness is summed by irradiation and cold-forming. This exactly applies for iron, as is shown by the diagrams in Fig. 2. For the anomalous behavior of an iron tungsten alloy (6% W) it is assumed that irradiation not only causes defects of the type "external atomic vacancies" as is usually the case but also a change in the distribution of the tungsten atoms in the direction of the thermodynamically more stable state. There are 3 figures, 2 tables, and 6 Soviet references.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of Sciences USSR). Institut metallovedeniya i fiziki metallov Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I. P. Bardina (Institute of Metallography and Metal Physics of the Central Scientific Research Institute of Nonferrous Metallurgy imeni I. P. Bardin)

SUBMITTED: June 29, 1960

Card 3/3

BATENIN I.V.

90

PHASE I BOOK EXPLOITATION SOV/6176

Konobeyevskiy, S. T., Corresponding Member, Academy of Sciences USSR, Resp. Ed.

Deystviye vadernykh izlucheniy na materialy (The Effect of Nuclear Radiation on Materials). Moscow, Izd-vo AN SSSR, 1962. 383 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk; Otdeleniye fiziko-matematicheskikh nauk.

Resp. Ed.: S. T. Konobeyevskiy; Deputy Resp. Ed.: S. A. Adasinskiy; Editorial Board: P. L. Gruzin, G. V. Kurdyumov, B. M. Levitskiy, V. S. Lyashenko (Deceased), Yu. A. Martynyuk, Yu. I. Pokrovskiy, and N. P. Pravdyuk; Ed. of Publishing House: M. G. Makarenko; Tech. Eds: T. V. Polyakova and I. N. Dorokhina.

Card 1/14

The Effect of Nuclear Radiation (Cont.)

PURPOSE: This book is intended for personnel concerned with nuclear materials.

COVERAGE: This is a collection of papers presented at the Moscow Conference on the Effect of Nuclear Radiation on Materials, held December 6-10, 1960. The material reflects certain trends in the work being conducted in the Soviet scientific research orginization. Some of the papers are devoted to the experimental study of the effect of neutron irradiation on reactor materials (steel, ferrous alloys, molybdenum, avial, graphite, and nichromes). Others deal with the theory of neutron irradiation effects (physico-chemical transformations, relaxation of internal stresses, internal friction) and changes in the structure and properties of various crystals. Special attention is given to the effect of intense Y-radiation on the electrical, magnetic, and optical properties of metals, dielectrics, and semiconductors.

The Effect of Nuclear Radiation (Cont.)

Card 6/14

L 4036-66 EWT(m) DIAAP GS

ACCESSION NR: AT5023796 UR/0000/62/000/000/0180/0183

AUTHOR: Sharov, B. V.; Batenin, I. V.; Rudenko, A. N.

TITLE: X ray apparatus for structural study of radioactive materials

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 180-183

TOPIC TAGS: x ray diffraction analysis, radioactive source, x ray apparatus

ABSTRACT: The chief difficulty involved in the use of a scintillation counter for recording soft x-ray quanta (Cu K_α-radiation) in x-ray diffraction units is the elimination of the photomultiplier background. An improvement of the electronic part of the apparatus is proposed; it is established that an optimum supply voltage can be found for which the number of noise pulses having amplitudes equal to or greater than the amplitude of the pulses from x-ray quanta is negligibly small as compared to the intensity of the x-ray lines customarily recorded. The modification introduces a number of advantages: (1) Fewer parts are necessary to construct the unit (one-third as many radio tubes and resistances); (2) It is no longer necessary to convert the discriminators for coincidence

Card 1/2

L 4036-66

ACCESSION NR: AT5023796

operation; (3) The efficiency of the apparatus is increased by 50%; (4) Adjustment of the apparatus is improved because of the convenient location of the NaI(Tl) scintillation crystal at the photomultiplier cathode. Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 18 August 62 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 002 OTHER: 000

Card 2/2

BATENIN, I.V.; SHAROV, B.V.

Texture of case-hardened uranium rods. Atom.energ. 16 no. 4: 372-373 Ap '64. (MIRA 17:5)

L 45181-65 EWT(l)/EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t)/EEC(b)-2/EWP(z)/EWP(b)/EWA(c)
Pr-4/Pad/Pi-4/Pu-4 IJP(c) JD/HM/JG/GS
ACCESSION NR: AT5011300 UR/2717/64/000/008/0112/0124

AUTHOR: Batenin, I. V.; Il'ina, V. A.; Kritskaya, V. K.; Sharov, B. V.

TITLE: Effect of neutron irradiation on the crystal structure and properties of metals and solid solutions

SOURCE: Dnepropetrovsk. Institut metallovedeniya i fiziki metallov. Trudy metallovedeniya i fiziki metallov, no. 8, 1964, 112-124

TOPIC TAGS: neutron irradiation, crystal structure, metal physical property, solid solution, metal deformation, microhardness, recrystallization, iron, copper, chromium, nickel, tungsten

ABSTRACT: Iron, copper, chromium, and the solid solutions iron + 8 at. % chromium, iron + 4 at. % nickel, and iron + 0.6 at. % tungsten were irradiated with a neutron flux of 10^{20} n/cm^2 and 10^{21} n/cm^2 at temperatures not exceeding 80°C. Samples were rectangular and measured 20 x 20 x 1 mm. Irradiation produced a fine crystal structure similar to that obtained by cold working. Samples were deformed on a press at room temperature up to a degree of area

Card 1/2

L 45181-65

ACCESSION NR: AT5011207

reduction of 80-90%. It was found that the defects produced by irradiation, which cause an increase in microhardness, are almost eliminated by a high degree of subsequent deformation. The presence of atoms of another sort (nickel, chromium, tungsten) in an alpha-iron crystal lattice has practically no effect on the recrystallization of irradiated metals. Orig. art. has: 20 figures.

ASSOCIATION: None.

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NR REF SOV: 011 OTHER: 017

bjo

Card 2/2

L 8572-66 EPF(n)-2/EWP(z)/EWA(h)/EWT(l)/EWT(m)/EWP(b)/EWA(d)/EWP(t) GG/MJW/JD

ACC NR: AT5023787 SOURCE CODE: UR/0000/62/000/000/0100/0105

AUTHOR: Petrov, P. A.; Batenin, I. V.; Rudenko, A. N.; Sharov, B. V.

ORG: none

TITLE: Investigation of the properties of Avial irradiated in a reactor

SOURCE: Soveshchaniye po probleme deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 100-105.

TOPIC TAGS: aluminum alloy, age hardenable alloy, neutron irradiated alloy, alloy creep resistance, neutron irradiation effect, /SAV-1 aluminum alloy

ABSTRACT: Specimens of SAV-1 Avial, an aluminum-base alloy containing (wt%) 0.085 Fe, 0.81 Si, 0.000043 B, 0.0026 Mn, 0.00002 Cd, 0.00058 Cu, 0.011 Zn, 0.004 Ti, 0.48 Mg, and 0.001 Ni, were annealed at 550—600C for 2 hours, furnace cooled, irradiated at 80C with an integrated flux of 10^{19} n/cm^2, cold strained, and after various heat treatment subjected to creep tests under a stress of 2.16 kg/mm^2 at temperatures up to 260C. The test results showed that while the creep rate of

Card 1/2

L 8572-66

ACC NR: AT5023787

unirradiated Avial was linearly dependent on the test time, the creep rate was higher in irradiated Avial and increased sharply after a period of time whose length decreased with increasing test temperature. For safe use of irradiated Avial under the investigated tension stress of 2 kg mm^2 the working temperature should be about 180C. Solution heat treatment at 500C and subsequent aging eliminated the irradiation-induced high creep rate of Avial. Irradiation brought about no grain growth or other structural changes in the alloy, but it sharply increased its microhardness to a value comparable to that obtainable in solution-heat-treated and aged unirradiated alloys. Microhardness measurements of irradiated and unirradiated alloys aged at various identical temperatures showed that irradiation and aging brought about essentially the same changes in the alloy structure, but that the age hardening with irradiation probably is associated with finer phase precipitations than aging after solution heat treatment. Also, the irradiated alloys were less susceptible to work hardening with deformation than the solution-heat-treated and aged alloy. The high temperature level at which the hardness of the irradiated alloys decreased seems to indicate that irradiation can be compared to solution heat treatment with subsequent aging rather than to work hardening. [MS]

SUB CODE: MM, SS/ SUBM DATE: 18Aug62/

jw

Card 2/2

L 9234-66 EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) GG/JD/GS

ACC NR: AT5023793 SOURCE CODE: UR/0000/62/000/000/0160/0167

AUTHOR: Batenin, I. V.; Il'ina, V. A.; Kritskaya, V. K.; Kurdyumov, G. V.; Sharov, B. V.

ORG: none

TITLE: Investigation of the effect of neutron on the fine crystalline structure and properties of metals and alloys

SOURCE: Soveshchaniye po probleme Deystviye yadernykh izlucheniy na materialy. Moscow, 1960. Deystviye yadernykh izlucheniy na materialy (The effect of nuclear radiation on materials); doklady soveshchaniya. Moscow, Izd-vo AN SSSR, 1962, 160-167

TOPIC TAGS: copper, iron, chromium, iron alloy, nickel containing alloy, chromium containing alloy, tungsten containing alloy, metal structure, alloy structure, neutron irradiation, irradiation effect

ABSTRACT: Copper, iron, and chromium annealed at 400, 600, and 900C, respectively, and Fe-Ni, Fe-Cr, and Fe-W alloys annealed at 600, 600, and 650C, respectively, were irradiated with an integrated neutron flux of about 10^{20} and 10^{21} n/cm^2 at 80C. Irradiation caused a noticeable widening of interference x-ray lines in copper and iron resulting from fragmentation of coherent portions of the crystalline lattice (block) (5×10^{-6} and 8×10^{-6} cm in copper and iron, respectively) and from the presence of elastic microdeformations (1×10^{-3} and 0.65×10^{-3} in copper and

Card 1/2

L 9231-66
ACC NR: AT5023793

iron, respectively). In the Fe-Ni alloy the widening of interference lines was much smaller, and none was observed in chromium and in the Fe-Cr and Fe-W alloys. Irradiation increased the microhardness of all the investigated metals and alloys; the increase varied for different metals and grew larger as flux density increased from 10^{20} to 10^{21} n/cm^2. The microhardness of the irradiated Fe-W alloy practically did not increase with a cold deformation of up to 60—70 deg, while that of the unirradiated alloy increased significantly with deformation, regardless of its magnitude. In the irradiated and unirradiated Fe-Ni alloy the changes in microhardness with cold plastic deformation were practically identical. The initial difference ($\Delta H \approx 45$ units) in the microhardness of the irradiated and unirradiated Fe-Ni alloy practically disappeared with a 30—40-deg cold deformation, after which the changes in microhardness followed a conventional course. A similar pattern was observed for irradiated and unirradiated chromium, except that the initial difference (ΔH) was 30 units and it decreased to zero after a 70—80 deg deformation. Investigation of the dependence of the microhardness on the annealing temperature showed that the nature of the crystal lattice defects created by plastic deformation differed substantially from the nature of the defects created by neutron irradiation. The former were much more stable; hence, weakening of irradiated metals began at appreciably lower annealing temperatures. Orig art. has: 15 figures. [MS]

SUB CODE: 11, 20/ SUBM DATE: 18Aug62/ ORIG:REF: 001

Card 2/2

L 29891-66 EWI(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AR6008794 SOURCE CODE: UR/0277/65/000/010/0006/0006

AUTHOR: Batenin, I. V.; Il'ina, V. A.; Kritskaya, V. K.; Sharov, B.V.

TITLE: Effect of neutron irradiation on the structure and properties of metals and solid solutions

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 10.48.43

REF SOURCE: Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta chernoy metallurgii, vyp. 36, 1964, 112-124

TOPIC TAGS: neutron irradiation, iron, chromium, copper, iron alloy, hardening

ABSTRACT: Results are given of the investigation of hardening and softening processes in iron, copper, chromium, and Fe-8% Cr; Fe-4% Ni; Fe-6% W, which underwent neutron irradiation (an integral neutron flow of 10^{20} and 10^{21} neutr/cm^2). Neutron irradiation results in a significant hardening of material, similar to the effect of cold plastic flow.

SUB CODE: 18,11/ SUBM DATE: none

Card 1/1 cc

ACCESSION NR: AP4029704 S/0089/64/016/004/0372/0373

AUTHORS: Batenin, P.V.; Sharov, B.V.

TITLE: The texture of hardened uranium rods

SOURCE: Atomnaya energiya, v. 16, no. 4, 1964, 372-373

TOPIC TAGS: hardening, deformation texture, textured sample, isotropic sample, crystal grain, diffusion transformation, beta phase crystal, isotropic uranium

ABSTRACT: The texture of the crystal grain found in uranium rods after they have been hardened is not a residual deformation texture but one apparently produced by the hardening process itself. The outward similarity of the hardening and residual textures has led a number of researchers to believe that they are both the same. Experiments have been made in this connection with pure uranium rods measuring 4 mm in diameter. After the hardening, the weak grain texture was found not only in the samples which had been grain-oriented before the hardening process but also in those which had been isotropic. The same sample can be heat-treated many times into an iso-

Card 1/2

ACCESSION NR: AP4029704

tropic state by annealing, or a weakly textured state by hardening. The above phenomenon can be explained by the assumed existence of two mechanisms: 1) the development of a hardening texture during the beta to alpha transformation, as the rod core undergoing rapid cooling before its transformation into an alpha state is compressed by the already transformed peripheral layers; 2) there are two types of transformation of commercially pure uranium from the beta phase into the alpha phase: diffusion (cooling at a slow rate) and martensite (cooling at a rapid rate to a temperature below 450C). Inasmuch as the residual texture has not been proved by the experiment, it is preferable to assume that the formation of a hardening texture is the direct outcome of the beta to alpha transformation. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 020ct63 DATE ACQ: 01May64 ENCL: 00

SUB CODE: NP NR REF SOV: 001 OTHER: 000

Card 2/2

SHEYNDLIN, A. Ye.; BATENIN, V. A.; ASINOVSKIY, E. I.

"Experimental investigation of non-equilibrium ionization in a mixture of argon and potassium."

report submitted for the Intl Symp on Magnetohydrodynamic Electrical Power Generation, Paris, 6-10 Jul 64.

Inst of High Temperatures, Moscow.

SHEYNDLIN, A.Ye.; ASINOVSKIY, E.I.; BATURIN, V.A.; BATENIN, V.M.

Apparatus for producing plasma and studying its properties.
Zhur. tekh. fiz. 33 no.10:1169-1172 O '63. (MIRA 16:11)

1. Nauchno-issledovatel'skiy institut vysokikh temperatur, Moskva.

L 00485-66 EPF(c)/EPF(n)-2/EPA(w)-2/EWT(l)/EWT(m)/EWG(m)/EWP(b)/EWP(t) IJP(c)

ACCESSION NR: AP5020554 UR/0294/65/003/004/0530/0535 66
533.915:535.338:546.293

AUTHOR: Asinovskiy, E. I.; Batenin, V. M.

TITLE: Experimental investigation of the continuous spectrum of an argon plasma

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 4, 1965, 530-535

TOPIC TAGS: plasma physics, ionized plasma, argon, emission spectrum, electric discharge, photoionization

ABSTRACT: The object of the work was an experimental investigation of the continuous spectrum of an argon plasma at atmospheric pressure and at temperatures of 10,000-15,000 K and in the wave length interval of 2500-7500 A. The experimental unit used an electric arc operating at atmospheric pressure and stabilized by cooled copper walls. The coefficient of continuous irradiation was measured by comparing the spectral brightness of the plasma source with a standard. For this purpose, an image of part of the arc, using a quartz achromatic condenser with f = 150 mm, was projected into the aperture of a DFS-8 spectrograph with a

Card 1/2

L 00485-66

ACCESSION NR: AP5020554

15

linear dispersion of 6.25 A/mm. The spectrum of an iron arc was employed as a wave length scale. The experimental data were compared with the Biberman-Norman Theory of the continuous spectrum of a low temperature plasma. On the basis of the experimental data, the authors succeed in establishing a relationship between the displacement of the threshold of photoionization in the plasma and the brightness of the continuum, and in evaluating the photoionization section from the 4s level. "In conclusion, the authors wish to thank V. A. Fabrikant for proposing the subject of the present work, L. M. Biberman and G. E. Norman for their useful discussions, and N. I. Rumyantsev for his aid in working up the experimental material." Orig. art. has: 3 formulas, 4 figures, and 1 table

ASSOCIATION: Nauchno-issledovatel'skiy institut vysokikh temperatur (Research Institute for High Temperatures)

SUBMITTED: 20Feb65 ENCL: 00 SUB CODE: ME, NP

NR REF SOV: 007 OTHER: 012

Card 2/2

LABETS, K.S.; KHAVIN, M.L.; BERNSHTEYN, E.A.; RUDYACHENKO, N.K.; BATENIN, Ye.S.

Some problems of teaching special technical courses by means of teaching machines. Izv. vys. ucheb. zav.; radiotekh. 6 no.4:395-401 Jl-Ag '63. (MIRA 16:11)

LEVIN, S.Z.; GUREVICH, G.S.; SEDOVA, I.G.; BATENINA, A.D.

Hydrogenation of butyraldehydes on a mixed zinc oxide catalyst. Zhur. prikl. khim. 37 no.8:1842-1843 Ag '64.
(MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.

LEVIN, S.Z.; SEDOVA, I.G.; KARPOV, A.Z.; BATENINA, A.D.; GUREVICH, G.S.

Hydrogenation of C_6 - C_8 aliphatic aldehydes on a zinc-containing catalyst. Zhur.prikl.khim. 37 no.7:1631-1633 Jl '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.

IEVIN, S.Z.; KARPOV, A.Z.; SEDOVA, I.G.; BATENINA, A.D.; GUREVICH, G.S.

Hydrogenation of butyraldehydes on industrial nickel-chromium catalysts. Zhur. prikl. khim. 37 no.6:1391-1394 Je '64.
(MIRA 18:3)

LEVIN, S.Z.; GUREVICH, G.S.; SEDOVA, I.G.; BATENINA, A.D.

Hydrogenation of propionaldehyde to propyl alcohol under medium pressure. Zhur.prikl.khim. 38 no.6:1414-1417 Je '65.

(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.

PASHKOV, A.B.; ITKINA, M.I.; BATENINA, N.V.; LYUSTGARTEN, Ye.I.

Comparative thermal stability of anionites. Plast.massy no.5:20-25 '61. (MIRA 14:4)

(Ion exchange resins—Thermal properties)

L 09019-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) FDN/JD/JG/DJ

ACC NR: AP6027798 SOURCE CODE: UR/0126/66/022/001/0138/0140

AUTHOR: Mironov, O. S.; Shmakov, A. D.; Batenina, O. L.; Novikova, K. Z.; Danielyan, T. A.; Tyukalov, Yu. M.

40
39

ORG: none

TITLE: Effect of oxides on the properties of molybdenum

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 1, 1966, 138-140

TOPIC TAGS: molybdenum, oxide formation, brittleness, metal grain structure

ABSTRACT: Oxygen is a harmful impurity in molybdenum, inducing its embrittlement at low temperatures. However, the causes of this have not previously been elucidated. Northcott (Sb. Molibden, pod. red. A. K. Katansona, M., IIL, 1959, str. 52) claims that oxygen is present in Mo in the form of the oxide MoO_2, but it would be more correct to assume that the composition of the oxides is not unambiguous and should be expressed by the formula Mo_xO_y. To investigate the behavior of molybdenum oxides during heating and cooling, an oxide close in composition to that of MoO_2 was obtained following partial reduction of the polymorphic oxide MoO_3. The obtained powder was pressed into 10x10 mm briquets and sintered in an argon

UDC: 541.45+539.56+546.77

Card 1/3

atmosphere at 1000°C for 6 hr. After this, the oxide's coefficient β of linear expansion at high temperatures (up to 800°K) was measured with the aid of dilatometers, and its phase composition before and after sintering examined by x-ray structural analysis; the roentgenograms indicated that the compositon of the investigated oxide corresponds to that of Mo_2O_3. An analysis of the temperature dependence of β (coefficient of linear expansion) showed that at from 150 to 20°C the value of β for Mo_2O_3 sharply decreases. Any further decrease in temperature, however, leads to a sharp rise in β. Considering that a similar anomaly is observed for MoO_3, it may be assumed that this effect is characteristic of molybdenum oxides in general. These findings also serve to elucidate the effect of oxygen on the properties of Mo with decrease in temperature. The mean β for Mo varies from $5.1 \cdot 10^{-6}$ at 0°C to $5.59 \cdot 10^{-6}$ at 500°C (Teplofizicheskiye svoystva veshchestv, spravochnik pod red. N. B. Vargaftika, M., Gosenergoizdat, 1956); the β for the oxide is somewhat lower. Moreover, at <100°C the β for the oxide sharply decreases. Then the volume of inclusions of molybdenum oxides decreases at a slower rate than the volume of the surrounding metal. If an oxide particle is present within a grain, the latter is subjected to internal compressive stresses which lead to an increase in hardness and decrease in plasticity. A more harmful effect is exerted by the oxide particles when they occur in between the grains. In this case tensile stresses leading to brittle intercrystalline fracture arise at the surfaces of contact between grains. Moreover, it is known that oxides

L 09019-67
ACC NR: AP6027798 O

in molybdenum are located chiefly along the grain boundaries. This probably is the reason why semifinished molybdenum products, with their high content of oxygen in recrystallized state, display a distinct tendency toward brittle intercrystalline fracture. Orig. art. has: 2 figures.

SUB CODE: 11/ SUBM DATE: 09Sep65/ ORIG REF: 002/ OTH REF: 002

Card 3/3 nst

KREYNES, Mikhail Aleksandrovich; ROZOVSKIY, Maks Solomonovich; BATENINA, T.G., red.

[Gears; mathematical bases for the selection of optimal systems] Zubchatye mekhanizmy; matematicheskie osnovy vybora optimal'nykh skhem. Moskva, Izd-vo Mosk. univ., 1965. 333 p. (MIRA 18:10)

BATENKO, A. I.

"Importance of the Physical Properties of Organomineral Fertilizers From Superphosphate and Compost When Introduced Under Cereal Crops on Meadow-Podzolic Soils." Cand Agr Sci, All-Union Sci-Res Inst of Fertilizers, Agricultural Engineering and Soil Sci, All-Union Order of Lenin Acad of Agricultural Sci imeni V. I. Lenin.
(KL, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

AKHMEROV, A.Kh., kand.biol.nauk; BATENKO, A.I., kand.sel'skokhoz.nauk; BRUDASTOVA, M.A., kand.tekhn.nauk; GOLOVINSKAYA, K.A., kand.biolog. nauk; GORDON, L.M., kand.ekon.nauk; DOROKHOV, S.M., rybovod-biolog; YEROKHINA, L.V., rybovod-biolog; IL'IN, V.M., rybovod-biolog; ISAYEV, A.I., rybovod-biolog; KADZEVICH, G.V., rybovod-biolog; KOMAROVA, I.V., kand.biol.nauk; KRYMOVA, R.V., rybovod-biolog; KULAKOVA, A.M., rybovod-biolog; MANONTOVA, L.N., kand.biol.nauk; MEYSNER, Ye.V., kand.biol.nauk; MIKHEYEV, P.V., kand.biol.nauk; MUKHINA, R.I., kand.biol.nauk; PAKHOMOV, S.P., kand.biol.nauk; SUKHOVERKHOV, F.M., kand.biol.nauk; SOKOLOVA, Z.P., rybovod-biolog; TSIUNCHIK, R.I., rybovod-biolog; RYZHENKO, M.I., red.; KOSOVA, O.N., red.; SOKOLOVA, L.A., tekhn.red.

[Handbook on pond fish culture] Spravochnik po prudovomu rybovodstvu. Red.kollegiia: A.I.Isaev i dr. Moskva, Pishchepromizdat, 1959. 374 p. (MIRA 13:4)

1. Moscow. Vserossiyskiy nauchno-issledovatel'skiy institut prudovogo rybnogo khozyaystva.

(Fish culture)

BATENKO, A.I.; BAKHTINA, V.N.

Using mineral fertilizers in ponds. Trudy sov. Ikht. kom. no.14:33-36 '62. (MIRA 15:12)

1. Vserossiyskiy nauchno-issledovatel'skiy institut prudovogo rybnogo khozyaystva (VNIPRKh).
(Fishponds)
(Fertilizers and manures)

BATENKO, V.F., inzh.; GVOZDEV, V.F., inzh.; VAKHLER, V.A., inzh.; PIL'SHCHIKOV, A.P., inzh.; ROGATSKIN, B.S., inzh.; BELYAKOVA, L.F., inzh.; KATKOV, G.S., inzh.

Ion-exchange filters with compound operation in power blocks with 300 Mw. ratings. Elek. sta. 36 no.10:8-15 O '65.
(MIRA 18:10)

SATENKOV, S.

Etiology of grippe. Zentrlbl. f. Bakt. I Abt.Orig. 131:70:2. 1934, with W. Yudenitsch and M. P. Izabolinskiy.

(State Bact. Inst., Smolensk)

BATENKOVA, A.M.

PHASE I BOOK EXPLOITATION SOV/4668

Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka

Metody analiza produktov proizvodstva sinteticheskogo kauchuka (Methods for Analyzing Products Obtained in the Manufacture of Synthetic Rubber) Leningrad, Goskhimizdat, 1960. 121 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni akad. S.V. Lebedeva.

Ed.: Ye. I. Shur; Tech. Ed.: T.A. Fomkina.

PURPOSE: This book is intended for scientists and technical personnel of chemical laboratories of the synthetic rubber, resin, petroleum, natural gas, textile, tanning, and other industries. It may also be used as a textbook for chemistry students in higher educational institutions and tekhnikums.

COVERAGE: The book contains 20 articles reviewing methods for analyzing raw materials and intermediate products used in the manufacture of synthetic rubbers and elastomeric substances and that were developed at the All-Union Scientific Research Institute for Synthetic Rubber imeni S.V. Lebedev and at Soviet synthetic rubber plants. No personalities are mentioned. References accompany the articles.

AVAILABLE: Library of Congress (TS1925.L4)

ROMANUK, M.; HEROUT, V.; SORM, F.; NAVES, Y.R.; TULLEN, P.; BATES, R.B.; SIGEL, C.W.

Terpenes. Pt. 161. Coll Cz Chem 29 no.4:1048-1058 Ap '64.

1. Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Sciences, Prague; Givaudan Corporation, Vernier-Geneva, Switzerland; University of Illinois, Urbana, Ill. 2. University of Arizona, Tucson, Arizona (for Bates).

BATEV, P.

Germanium. Priroda Bulg 12 no.2:60-62 Mr-Ap '63.

BATEVA E.

(22)

Sofia, Doklady Bolgarskoy Akademii Nauk, Vol 15, No 1, 1962 (cont)

11. "The Influence of Aluminum Sulfate on the Formation of Soot Carbon and the Extraction of Metallic Iron in the Reduction of Ferric Oxide and Iron Ores with Carbon Oxide," N. KURCHAKOV of the Institute of General and Inorganic Chemistry of the Bulgarian Academy of Sciences; article in Russian; pp 45-48.

12. "The Reduction of Organic Compounds with Magnesium or Zinc in Liquid Ammonia," Ch. IVANOV and P. MARKOV of the Department of Organic Chemistry of the University of Sofia; article in German; pp 49-52.

13. "Concerning the Extraction of Needle-shaped Gamma-Ferric Oxide," P. PESHEV, G. [illegible], and I. [illegible] of the Scientific Research Institute for Cinematography and Radio; article in German; pp 53-56.

14. "On the Adsorption of Chlorine Ions on Silver Surfaces," G. [illegible] and D. LAZAROV; article in English; pp 57-60.

15. "The Semiconductor Properties of Certain Cobalt-Oxide Catalysts and the Catalytic Oxidation of Ammonia," S. [illegible], D. [illegible], and E. BATEVA; article in Russian with English summary; pp 61-64.

16. "Integrated Indicators on Dryness and Natural Water Supply in Various Irrigation Regions," G. MARKOV of the Institute of Water Economy and Construction, Bulgarian Academy of Sciences; article in English; pp. 65-68.

17. "Dobrogeites--a New Genus of Valanginian Ammonites," T. NIKOLOV; article in English; pp 69-71.

18. "Certain Peculiarities of the Emulsion Structures in the Blende of the Madzharovo Poly-metal Deposits in the Eastern Rhodopes," A. ATANASOV; article in Russian with English summary; pp 73-76.

19. "The Influence of Temperature Changes and the Acidity of the Medium on the Thermal Stability of Certain Types of Bacteria in Canned Fruits and Vegetables," T. KALINOV; article in Russian; pp 77-80.

20. "On the Role of the Lymphocytes in Immunogenesis," V.L. MARKOV and V.Ch. VULCHANOV of the Department of Immunology, Institute of Microbiology, Bulgarian Academy of Sciences; article in English; pp 81-84.

BULGARIA/Electricity - Semiconductors. G

Abs Jour : Ref Zhur Fizika, No 4, 1960, 9115

Author : Kynev St., Bateva, Yel
Inst : -
Title : On the Internal Photoeffect and Photodesorption of Oxygen in Zinc Oxide

Orig Pub : Dokl. Bolg. AN, 1959, 12, No 1, 33-36

Abstract : Using measurements of the dark conductivity and photoconductivity of zinc oxide, the authors have investigated the photodesorption of oxygen from the surface of ZnO as a function of the temperature and frequency of the incident light. It is established, in particular, that the photodesorption is caused by the light both in the region of principal absorption and in the region of impurity absorption.

Card 1/1

ACC NR: AP6034473 (N) SOURCE CODE: UR/0392/66/000/005/0093/0094

AUTHOR: Drobinskiy, A. D. (Zaporozh'ye); Rostapshev, M. F. (Zaporozh'ye); Bateyko, V. Ya. (Zaporozh'ye); Kostetskaya, V. M. (Zaporozh'ye)

ORG: none

TITLE: Nervous system disorders after antirabies vaccination

SOURCE: Kazanskiy meditsinskiy zhurnal, no. 5, 1966, 93-94

TOPIC TAGS: vaccine, rabies, nervous system disease, immunology

ABSTRACT: Cerebral paralysis, meningoencephalitis, meningoencephalomyelitis, radiculomyelitis, ganglioradiculoneuritis, polyneuritis, and neuritis have been observed during administration of antirabies vaccine. Since 1947, antirabies gamma globulin has been used, with prior desensitization, for treatment of complications. However, this treatment may aggravate allergic postvaccinal encephalomyelitis. Among 15 of the authors' patients, the first complications appeared after 6—12 vaccinations in eight cases, after the 19th—22nd in two, and after the 32nd to 42nd injections in five. Initial complaints varied, including headache, general weakness, and other symptoms. Encephalitis occurred in three cases, encephalomyelitis in five, encephalomyelopolyradiculoneuritis in six, and myelitis in one. The course of the complications varied. In

Card 1/2 UDC: 616.8—616.988.21—614.47

ACC NR: AP6034473

some; recovery followed termination of vaccination and brief treatment; in others, illness was prolonged and serious, with death in two cases. [W.A. 50]

SUB CODE: 06/ SUBM DATE: none

Card 2/2

ACC NR: AP6034473 (N) SOURCE CODE: UR/0392/66/000/005/0093/0094

AUTHOR: Drobinskiy, A. D. (Zaporozh'ye); Rostapshev, M. F. (Zaporozh'ye); Bateyko, V. Ya. (Zaporozh'ye); Kostetskaya, V. M. (Zaporozh'ye)

ORG: none

TITLE: Nervous system disorders after antirabies vaccination

SOURCE: Kazanskiy meditsinskiy zhurnal, no. 5, 1966, 93-94

TOPIC TAGS: vaccine, rabies, nervous system disease, immunology

ABSTRACT: Cerebral paralysis, meningoencephalitis, meningoencephalomyelitis, radiculomyelitis, ganglioradiculoneuritis, polyneuritis, and neuritis have been observed during administration of antirabies vaccine. Since 1947, antirabies gamma globulin has been used, with prior desensitization, for treatment of complications. However, this treatment may aggravate allergic postvaccinal encephalomyelitis. Among 15 of the authors' patients, the first complications appeared after 6—12 vaccinations in eight cases, after the 19th—22nd in two, and after the 32nd to 42nd injections in five. Initial complaints varied, including headache, general weakness, and other symptoms. Encephalitis occurred in three cases, encephalomyelitis in five, encephalomyelopolyradiculoneuritis in six, and myelitis in one. The course of the complications varied. In

Card 1/2 UDC: 616.8—616.988.21—614.47

ACC NR: AP6034473

some, recovery followed termination of vaccination and brief treatment; in others, illness was prolonged and serious, with death in two cases. [W.A. 50]

SUB CODE: 06/ SUBM DATE: none

Card 2/2

BATEYKO, V.Ya.

Organization of treatment and dispensary care at a local sanatorium for children with the sequelae of poliomyelitis. Vop. okh. mat. i det. 6 no.11:69-72 N '61. (MIRA 14:12)

1. Iz Zaporozhskogo poliomiyelitnogo sanatoriya (glavnyy vrach L.D.Khalashi).

(POLIOMYELITIS)

BATEYKO, V.Ya.

Use of paraffin heaters for hot-wool wrapping. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.1:78 '64.
(MIRA 17:9)

1. Zaporozhskiy poliomiyelitnyy sanatoriy (glavnyy vrach M.P. TSvirkun).

VOCETKA, Jaroslav, promovany matematik; BATHA, Michal, promovany matematik

Numeral weather forecast on automatic computers. Letecky obzor 9 no.3:73 Mr '65.

BATHORI, Dezso,okl.mernok, igazsagugyi szakerto

Accident caused by one nail. Auto motor 14 no.10:25 My '61.

BATHORY, F.

HUNG

Investigations on the adsorbency of textiles — *Textilanyagok szívóképességének vizsgálata* — F. Báthory, J. Gyimesi and P. Holczer (Hungarian Textile [illegible] *Textiltechnika* - 1953, No 9, pp. 258 - 262, 14 figs, 3 tabs.)

Until recently not much attention was paid to the adsorbency of textiles in spite of its importance in case of certain materials, e.g. for (1) towels, diapers, handkerchiefs, (2) gauze and cotton, for medical purposes, (3) wicks for oil lamps, (4) wetting agents. To satisfy this need an apparatus for testing adsorbency was constructed. The apparatus consists of a horizontal bar carrying vertical transparent graduated scales. Materials to be tested are fastened to the scales. At the beginning of the test the device is lowered until the materials to be tested dip into a coloured liquid contained in a basin. Every three minutes the fabric is examined to see how high the adsorbed liquid has reached. In the case of cotton yarns the higher the count the lower the adsorbency, as for wicks adsorbency increases parallelly with the width. Cotton has a higher adsorbency than linen. Wicks have a better adsorbency than cotton yarn since the weft acts as a medium for transferring moisture.

BATHORY, J.

Furan compounds. II. Conversion of 2-acetobenzofuran to 2-methyl-3-hydroxychromone. L. Vargha, J. Ramonczai, and J. Bathory (Bolyai Univ., Cluj, Rumania, Cluj Kolozsvar). *J.* [redacted] 71, 2652-5(1949); cf. *C.A.* 42, 2058h.—The *p-toluenesulfonate* (I) of 2-acetylbenzofuran oxime (m. 100-2°) (50 g.) in 250 cc. MeOH, kept 7 days at 35°, gives 35% *2-methyl-3-hydroxychromone* (II), m. 184-5°, gives a deep blue color with aq.-alc. $FeCl_3$; *Na salt*, yellow. II does not react with NH_2OH, $PhNHNH_2$, and $H_2NNHCONH_2$ and does not give an oxonium salt with HCl or $ZnCl_2$; it is unchanged after refluxing 2 hrs. with 2 *N* HCl. The ethereal mother liquor from II yields 2-coumaranone, m. 52°. The ethereal reaction product from 80 g. I, washed with H_2O and 50 cc. 2 *N* NaOH, yields 20% *2-methylchromanone 3-di-Me acetal*, $C_6H_4.CO.C(OMe)_2.CHMe.O$ (III), pale yellow, b_6 120-2°, unchanged on boiling several hrs. with 25% H_2SO_4 or on heating 6 hrs. with BzCl in quinoline; it is stable toward 10% NaOH or on refluxing 4 hrs. in H_2O_2-AcOH. The NaOH ext. yields 20% *(o-hydroxyphenyl)acetic acid* (IV), m. 147-9°. The *3-di-Et acetal* (prepd. from I and EtOH), b_5 118-22°. II yields an *acetate* (V), m. 111-12°, a *benzoate*, m. 165°, a *p-toluenesulfonate*, m. 152°, and a *Me ether*, m. 106°. II, refluxed 4 hrs. with 10 cc. 15% H_2O_2 and 10 cc. AcOH, gives IV, which results also on refluxing 3.4 g. II 2 hrs. in 100 cc. 2 *N* H_2SO_4. $BrCH_2CO_2Ph$ (20 g.) and 40 g. $AlCl_3$, heated 7 hrs. at 135-40° and the product extd. with boiling petr. ether (b. 80-90°), give 10 g. *o-hydroxy-ω-bromoacetophenone* (VI), m. 70-1°; the insol. portion (6 g.) is the *p-isomer*, m. 146°. VI (1 g.), 2 g. Ac_2O, and 1 g. AcONa, heated 90 min. at 180°, give 0.6 g. V. III (2.2 g.), 1 g. $NH_2OH.HCl$, and 1 g. AcONa in 25 cc. EtOH, refluxed 4 hrs., give *2-methyl-4-chromanone oxime 3-di-Me acetal*, $C_6H_4.C(:NOH).C(OMe)_2.CHMe.O$

2/2 L. Vargha, J. Ramonczai & J. Bathory

(VII), m. 156-7° (*Bz deriv.*, m. 140°); the *oxime* (VIII) of the 3-di-Et acetal, m. 87-8° (*phenylhydrazone*, m. 123°); VII or VIII and 10 cc. 2 *N* H_2SO_4 in 10 cc. EtOH, refluxed 2 hrs., give II

C. J. West

BATHORY, JOZSEF

A Karbamido adduktkepzes; zaro-jelentes.

Budapest, Hungary, 1952, 98 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

BATHORY, Jozsef

A KARBAMIDOS ADDUKTKEPZES; OSSZEFOGLALO JELENTES

Budapest, Hungary, 1955, 45 p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 6, June 1959
Uncl.

HUNGARY/Chemical Technology. Chemical Products and Their Uses. Part III. Chemical Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 51526

Author : Bathory, Jozsef
Inst : -
Title : Formation of Crystalline Complexes Upon Carbamide Treatment of Petroleum Products.

Orig Pub : Magyar kemik, lapja, 1955, 10, No 9, 284-287

Abstract : No abstract.

Card : 1/1

HUNGARY / Chemical Technology. Chemical Products and Their Application. Chemical Processing of Natural Gases and Petroleum. Motor and Rocket Fuels. Lubricants. H-23

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 2547.

Abstract: and is filtered. The filtered (almost anhydrous) precipitate is washed four times with acetone in the amount of 50%. The acetone is distilled off, and an oily layer (in the filtrate) separates (iso-compounds). The aqueous layer together with the washed precipitate is subjected to a decomposition of the crystalline compound at 60-70°C. (acetone, containing > 7% of water does not dissolve G); the acetone is distilled off, the oily layer is separated (hydrocarbons of a normal structure), the aqueous layer (carbamide solution) is recycled. -- G. Yudrevich.

Card 2/2

BATHORY, J.; ERDI, M.; FREUND, M.

Freeing mineral oil products from paraffin by means of extractive crystallization. p. 64. (Magyar Kemikusok Lapja, Vol. 12, No. 2, Feb 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

COUNTRY : HUNGARY
CATEGORY : Chemical Technology. Chemical Products and Their Uses. Part 3. Processing of Natural*
ABS. JOUR. : RZKhim., No. 1 1960, No. 2479

AUTHOR : Bathory, J.
INST. : Hungarian Research Institute of Petroleum and**
TITLE : Study of the Formation of Crystalline Carbamide Complexes with Hydrocarbons

ORIG. PUB. : Magyar kem. lapja, 1958, 13, No 10-12, 380-383

ABSTRACT : This is a brief account of the results of works conducted by the author with co-workers at the Hungarian Research Institute of Petroleum and Natural Gas from 1950 on for the study of the conditions of the use of carbamide for deparaf-

*Gases and Petroleum. Motor and Rocket Fuels. Lubricants
**Natural Gas

CARD: 1/2

GATHORY, J.

Distr: 4E2c(j) 7

47. Recovery of paraffin wax with urea, J. Háthóry, N. Bródi. *Magyar Kémikusok Lapja*, Vol. 13, 1958, No. 1, pp. 20—23, 2 figs., 3 tabs.

An oil-free paraffin wax is obtained from wax distillates by treatment at room temperature with urea in the presence of methyl isobutyl ketone, acetone or methyl alcohol. The advantage of the method using methyl isobutyl ketone is that the same compound serves as both solvent and wetting agent and a snow-white oil-free wax is obtained without refining, its disadvantage being that methyl isobutyl ketone is an expensive import material. Thus, under Hungarian conditions the methyl alcohol process may be regarded as most realistic. In this case the extraction is made with solid urea, the solvent and wetting agent are inexpensive. The end products are an oil of satisfactory freezing point and an oil-free wax which becomes snow white on refining with mild acid. The complex inclusion compound can be conveniently handled, filtered and washed.

4
2 - may
1

BATORI, I. [Bathory, J.]

Complex formation of carbamide in the presence of water as an activator. Khim.i tekh.topl.i masel 5 no.5:21-26 My '60. (MIRA 13:7)

1. Vengerskiy nauchno-issledovatel'skiy institut nefti i prirodnogo gaza.
(Urea) (Paraffins)

H/006/61/000/007/001/001
D215/D305

AUTHORS: Freund, Mihály; Báthory, Józef and Ország, Imre

TITLE: The growth of particle size of hydrocarbon adducts derived from solid carbamide

PERIODICAL: Magyar kémikusok lapja, no. 7, 1961, 293-300

TEXT: According to technical literature, the formation of adducts from carbamide solutions is a process of "trans-crystallization". Because of lack of knowledge in this domain, the authors studied the forming of adducts only from solid carbamide. In this case trans-crystallization takes place with the help of melting agents and solution promoters, i.e. essentially in solution. It was found that the particle size of the adducts can be varied by the choice of the conditions of the adduct formation. The adduct can be made with good or bad resistance to abrasion. It was also found that each adduct is formed from one carbamide crystal only, they do not "stick" together. The adduct "grows"into the carbamide crystal, covering it with a continuous

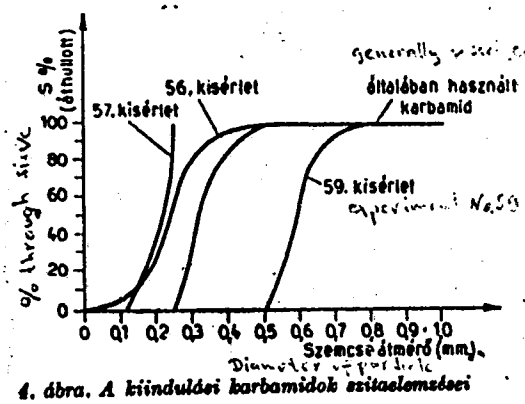
Card 1/8

The growth of particle size...

layer which can grow thicker, but without altering the original crystal of the carbamide. Formation of adducts is accompanied by a volume increase of about 39%. When the adduct-forming reaction takes place very fast, the adducts will be completely powdered. The particle size of the adduct depends on the rate of formation; therefore, the effects of diluting, wetting, cooling, flotation, basic raw material and the particle size of carbamide on the size of adducts were studied. The laboratory experiments were carried out in a 2000 ml. three-necked glass flask. In the middle opening an electric mixer was mounted, the second opening held a thermometer while the third one was used for introducing materials. Most experiments were carried out at room temperature. The time between the starting of the mixer and the usual starting of adduct formation was called an "induction period". Sieve analysis of the basic carbamides used in the experiments is shown on Fig. 4. The effects of different diluents on the particle size of adducts are shown in Table 1.

(for Fig. 4 and Table 1 see next card)

The growth of particle size...



4. ábra. A kiindulási karbamidok szitaelemzései

Fig. 4. The screen analysis of the basic carbamides.

Legend to Table 1.
1) Experiment No.; 2) Basic gas-oil, gr; 3) Boiling range of diluent, °C; 4) Diluent hydrocarbon, gr; 5) Flotating soil, percent of basic material and diluent; 6) Carbamide, gr; 7) Initiating adduct, gr; 8) Induction period; 9) reaction time; 10) Normal gas-oil percent in adduct; 11) The mean particle size of the adduct, mm; 12) The mean particle size of the carbamide, mm;

a) Basic material : Normal gas-oil, boiling point (F.p.); specific gravity (fs). Diluent: petroleum distillates, with varying

Card 3/8

(for Table 1 see next card)

Card 4/8

H/006/61/000/007/001/001
D215/D305

The growth of particle size...

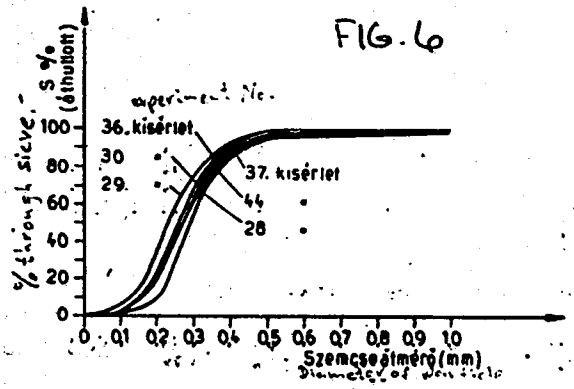
boiling range. b) Basic material: gas-oil of Nagylengyel, freezing point -15.4° C. Diluent: iso-gas-oil.

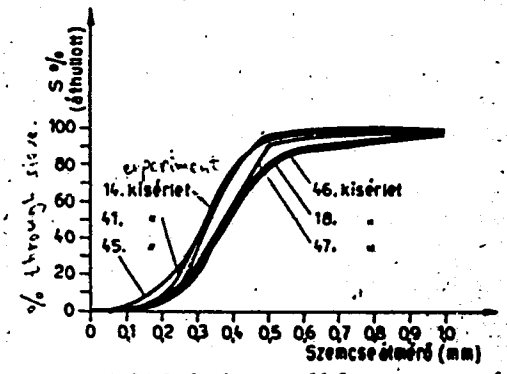
Kísérlet száma	Kiindulási gázolaj, g	Hígító Fp határai, C°	Hígító szénhidrogén, g	Derítőföld s% kiind. anyagra és hígítóra	Karbamid, g	Boolló addukt, g	Indukciós periódus	Reakcióidő	n-gázolaj s% adduktban	Az addukt átlagos szemcseméretje, mm	A karbamid átlagos szemcseméretje, mm
1	2	3	4	5	6	7	8	9	10	11	12
a) *Kiindulási anyag:* n-gázolaj Fp.: 235—337, f_4: 0,7782, n_D^{20}: 1,4365 *Hígító:* különböző forrponthatárú ásványolajpárlatok											
6.	70	210—260	350	—	230	10	43′	2h45′	19,1	0,41	0,26
8.	60	320—380	500	5	210	—	3′	1h30′	19,8	0,31	0,26
9.	60	70—110	500	10	200	—	1′	2h	17,0	0,28	0,26
10.	60	350—380	500	10	200	1h15′ után 10	8′	2h	12,8	0,32	0,26
b) *Kiindulási anyag:* nagylengyeli gázolaj Fp: 223—347 C°, f_4^{15}: 0,8264, Dp: —15,4 C° *Hígító:* izo-gázolaj, Fp: 220—350, f_4^{15}: 0,8457, Dp.: —64 C°											
15.	400	220—350	400	5	440	44	3′	2h	18,4	0,24	0,26
19.	400	220—350	616	5	330	33	5′	1h30′	15,4	0,33	0,26

The growth of particle size...

The effects of various wetting agents on the particle size of adduct are shown in Fig. 6. The effects of cooling on the particle size of adducts are shown on Fig. 7.

FIG. 6



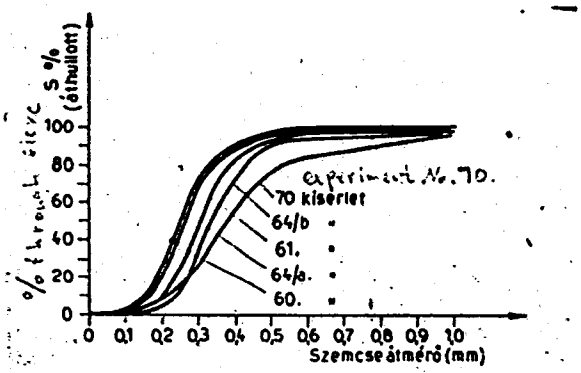


7. ábra. A hűtés hatása az addukt szemcsenagyságára

Fig 7. The effect of cooling on the particle size of adduct.

Card 5/ 8

The effects of flotation on the particle size of adducts are shown in Fig. 8. The effects of the chemical composition of the basic material - are shown in Table 5.



8. ábra. A derítés hatása az addukt szemcseméretére
Fig. 8. The effect of flotation on the particle size of adducts

Legend to Table 5.
1) Experiment No.; 2) Petrolate g; 3) Flotating soil, percent of petrolate ; 4) Diluent isogas-oil g; 5) Carbamide g; 6) Initiating adduct, percent of carbamide; 7) Starting temp. °C; 8) Final temp. °C; 9) Induction period; 10) Reaction time; 11) Normal cerezin, percent of adduct; 12) The mean particle size of adducts, mm; 13) The mean particle size of carbamide mm. 14) Mark 'S_2' petrolate without

Card 6/8

The growth of particle size...

solvent. 15) Mark 'B' petrolate without solvent.

5. táblázat
Table 5.

A kísérlet száma	Petrolátum, g	Doritföld, s% petrolátumra	Hígító i-gázolaj, g	Karbamid, g	Beoltó addukt, s% karbamidra	Indulási hőfok, C°	Véghőfok, C:	Indukciós periódus	Reakció idő	n-cerezin, s% az addukt-ban	Az adduk átlagos szemcsenagysága, mm	A karbamid átlagos szemcsenagysága, mm
64a	B 380	40	1520	760	10	55	40	21′	2h	12,3	0,29	0,26
64b	Sz 360	50	1440	720	10	55	40	1h20′	3h35′	13	0,38	0,26
70.	B 23	10	315	126	10	50	40	7′	2h	14,5	0,41	0,26
71.	Sz 23	10	315	126	10	60	40	10′	2h	19,6	Por	0,26

„Sz" jelű oldószermentes petrolátum fs_{15}^{70}: 0,8534, n_D^{70}: 1,4760, Dp.: 62 C°
„B" jelű oldószermentes petrolátum fs_{15}^{70}: 0,8510, n_D^{70}: 1,4730, Dp.: 54 C°

Finally the effects on the size of adducts of the crystal size of carbamide are shown in Fig. 9.

Card 7/8

The growth of particle size...

There are 9 figures, 6 tables and 31 references: 19 Soviet-bloc and 12 non-Soviet-bloc. The references to the four most recent English-language publications read as follows: A.E. Smith, Acta Cryst. 5, 224, (1952); T.H. Rogers, J.S. Brown etc. Petr. Ref: 36: 5, 217-220 (1957); L.C. Fetterly, Ph.D. Thesis, Univ. of Washington (1950); P.H. Calderbank, Nikolov, N.S. J.Physic Chem. 60 1-6 (1956).

ASSOCIATION: Magyar asvânyolaj és földgáz kísérleti intezet, Veszprém - Budapest (Hungarian Petroleum and Natural Gas Experimental Institute, Veszprem-Budapest)

SUBMITTED: September 9, 1961

Card 8/8

BATHORY, Jozsef; LORINC, Andor

Synthesis and investigation of alkyl sulfonates produced from various mineral oils. Magy kem lap 16 no.1:17-23 Ja '61.

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet (for Bathory).
2. Kozponti Kolorisztikai Kutato Laboratorium (for Lorinc).

FREUND,Mihaly; BATHORY,Jozsef; ORSZAG,Imre

Grain size increase of hydrocarbon adducts originated from solid carbamida. Magy kem lap 16 no.7:293-300 JI '61

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet, Veszprem-Budapest.

BATHORY, Jozsef, dr., ORSZAG, Imre; (Veszprem, Wartha Vince u.2-6)

New petrochemical raw materials: synthesis of normal hydrocarbons by using urea. Acta chimica Hung 31 no.1-3:41-51. '62.

1. Ungarisches Erdol und Erdgas Forschungsinstitut.

BATHORY, Jozsef, dr. (Veszprem, Wartha Vince u.2-6)

Experiments for the production of ethylene oxide on aluminum carrier by means of silver catalysts. Acta chimica Hung 31 no.1-3:31-39. '62.

1. Ungarisches Erdol und Erdgas Forschungsinstitut.

BATHORY, Jozsef; BALOUGH, Andras

Situation concerning the preparation of ethylene-oxide in the world. Magy kem lap 17 no.12:529-539 D '62.

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet, Veszprem.

BATHORY, Jozsef; FOLDES, Erno

Preparation and use of propylene. Magy kem lap 20 no.3:119-124 Mr '65.

1. Hungarian Mineral Oil and Natural Gas Experimental Institute, Veszprem.

L 20833-66 EWT(m)/EWP(j) RM

ACCESSION NR: AT5022528 HU/2502/64/042/002/0119/0130

AUTHOR: Orszag, Imre (Orsag, I.)(Doctor)(Veszprem); Bathory, Jozsef (Batori, Y.) (Doctor)(Veszprem)

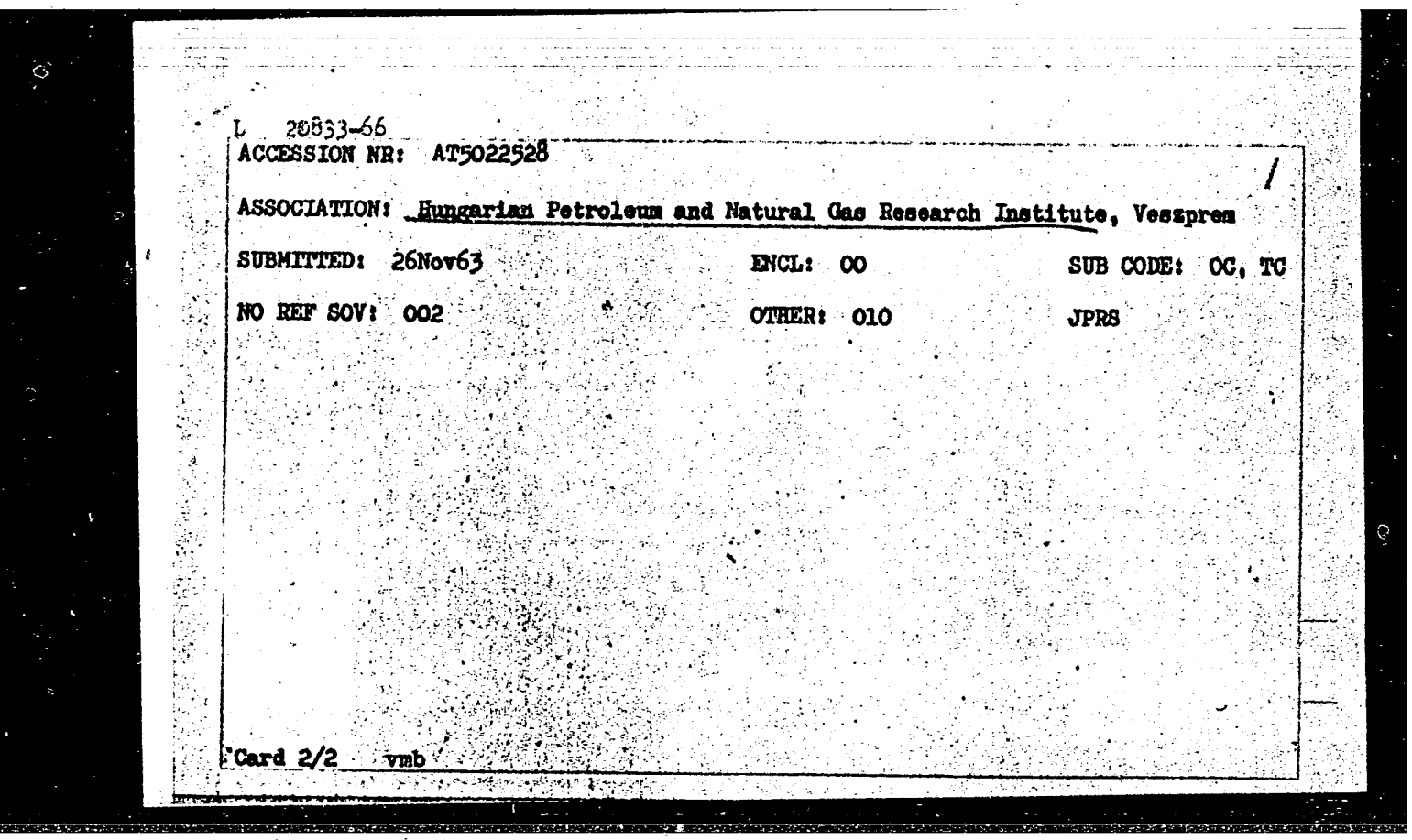
TITLE: Dissociation of urea adducts

SOURCE: Academiae scientiarum hungaricae. Acta chimica, v. 42, no. 2, 1964, 119-130

TOPIC TAGS: urea, thermal analysis, heat of dissociation

Abstract: [English article] A luquid thermal analysis method was developed for the determination of the dissociation temperature of adducts and the thermodynamic data of the adducts were used to calculate various physical characteristics. The application of these methods to the investigation of the dissociation of adducts of n-hydrocarbons with a short chain was described. The dissociation temperatures of eight n-paraffin adducts were established and the correlations between dissociation temperature and the number of carbon atoms per molecule of the n-hydrocarbon were mathematically described. The measurement of these dissociation temperatures by differential thermal analysis is impossible owing to the low stability of the urea adducts involved. Orig. art. has 5 graphs and 2 tables.

Card 1/2



L 20833-66
ACCESSION NR: AT5022528

ASSOCIATION: Hungarian Petroleum and Natural Gas Research Institute, Veszprem

SUBMITTED: 26Nov63 ENCL: 00 SUB CODE: OC, TC

NO REF SOV: 002 OTHER: 010 JPRS

Card 2/2 vmb

BATHORY, Jozsef

Oxidation methods in petrochemistry. Kem tud kozl MTA 22 no.3/4:305-312 '64.

Preparing olefins with higher molecular weights. Ibid.:319-328

1. Hungarian Mineral Oil and Natural Gas Experimental Institute, Veszprem-Budapest.

ORSZAG, Imre, dr.; BATHORY, Jozsef, dr.

Rapid method for quantitative determination of n-hydrocarbons by means of urea. Acta chimica Hung 40 no.4:368-378 '64.

1. Eksperimental'nyy institut nefti i prirodnykh gazov, Veszprem, Wartha Vince u.2-6.

BATHORY, P.;GERGELY, K.;SURANYI, G.

Nitrogen metabolism of premature infant. Gyermekgyogyaszat 3 no. 8: 245-247 Aug 1952. (CLML 23:5)

1. Doctors. 2. Budapest Municipal Counselling Division for Premature Infants.